32-1120: CTGF (182-250 a.a.) Recombinant Protein

Alternative Name : CCN2,NOV2,HCS24,IGFBP8,MGC102839,CTGF,Connective Tissue Growth Factor.

Description

Source : Escherichia Coli. The Connective Tissue Growth Factor amino acids 182-250, produced in E.Coli, is a fusion protein with His Tag (4 kDa), having a total molecular mass of 15 kDa. Connective Tissue Growth Factor belongs to the CCN family of proteins. The CCN family presently consists of six members in human also known as: Cyr61 (Cystein rich 61), CTGF (Connective Tissue Growth Factor), Nov (Nephroblastoma Overexpressed gene), WISP-1, 2 and 3 (Wnt-1 Induced Secreted Proteins). The CCN genes encode secreted proteins associated with the Extracellular Matrix (ECM) and cell membrane. CCN proteins are matricellular proteins which are involved in the regulation of various cellular functions including: proliferation, differentiation, survival, adhesion and migration. They are expressed in derivatives of the three embryonic sheets and are implicated in the development of kidney, nervous system, muscle, bone marrow, cartilage and bone. During adulthood, they are implicated in wound healing, bone fracture repair, and pathologies such as: fibrosis, vascular ailments and tumorigenesis.Full length secreted CCN proteins can show an antiproliferative activity, whereas truncated isoforms are likely to stimulate proliferation and behave as oncogenes. The full length protein consists of four modulesModule I shares partial identity with the N-terminal part of the Insulin-like Growth Factor Binding Proteins (IGFBPs).Module II includes a stretch of 70amino acid residues - which shares sequence identity with the Von Willebrand Factor Type C repeat (VWC).Module III contains sequences sharing identity with the Thrombospondin type 1 repeat (TSP1) (WSXCSXXCG), which is thought to be implicated in the binding of sulfated glycoconjugates and to be important for cell adhesion. Module IV, also designated CT, is encoded by exon5. It is the leasts conserved one of the four domains at the level of nucleotide sequence, but it appears to be critical for several of the biological functions attributed to the CCN proteins. Module IV resembles the CT domain of several extracellular protein including, Von Willebrand's factor and mucins. Sequence similarities to heparin-binding motifs are also found within this domain. Proteolysis of the secreted full-length CCN proteins that has been reported in the case of CCN2 and CCN3 might result in the production of CCN-derived peptides with high affinity for ligands that full-length CNN proteins bind only poorly. Amino-truncated CCN2 isoforms were biologically active whereas no specific biological activity has been attributed to the truncated CCN3. Although the molecular processes underlying the production of these secreted isoforms is presently unknown, it is important to note that proteolysis occur at the same amino acid residues in both CCN2 and CCN3. An elevated expression of CCN2 has also been detected by Northern blotting in human invasive mammary ductal carcinomas, dermatofibromas, pyogenic granuloma, endothelial cells of angiolipomas and angioleiomyomas, and in pancreatic tumors.

Product Info

Amount :	20 µg
Purification :	Greater than 90.0% as determined by SDS-PAGE.
Content :	Lyophilized without any additives.
Storage condition :	Lyophilized CTGF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CTGF should be stored at 4°C between 2-7 days and for future use below -18°C.For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles.

Application Note

It is recommended to reconstitute the lyophilized CTGF in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

For Research Use Only. Not for use in diagnostic/therapeutics procedures.